

The Role of Islamic Architecture in Promoting the Quality of Life

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Abstract

All religions and schools of thought represent their specific ideas about nature, natural elements and its relationship with man in such a way that studying them can help explain their influences on shaping the environmental surroundings. Recent debates prove that majority of discussions are focused in protection and conservation of nature and it is implying that man's need is restricted to elimination of pollutions. In other words, solving his problems, related to nature seems to be the only concern while it is necessary to pay attention to the quality and quantity of life equally. In Islamic culture, deliberation on the nature and discovering the dominant rules, play a vital role as nature and its components are considered as divine symbols to guide man toward recognition of nature and also a mutual relationship between man and nature can be used to construct a suitable environment in harmony with existed regularity in nature.

This research is based qualitative method and gathering date by library studies and collecting information. The conclusion of this research show that in Islamic civilization specially visual art, architecture and urbanism, naturalistic motivation are investigated to present manifestation of Islamic art and natural aesthetic, this cycle is eternal and can help a man to recognize the nature.

Keywords: Islamic Architecture, nature, built environment, natural elements, architecture

Introduction

Sometimes nature has been defined as world with all events related to it. The negative influence of man on nature does not have a long history and is a relatively new phenomenon results from increasing pollution and the dominance of man on the nature. Since industrial revolution, extreme usage of natural resources increased and it caused the gradual emptiness in natural resources and unbalance the natural stability and eventually appearing the unharmonious between nature and man (Nzazarizadeh, 2006).

It has been three decades that the relationship between man and nature due to occurring a variety of environmental chaos, has become conflicting. Designing cities and buildings in the entire world can have a dual role including destructing or improving the environment (Jodat, 2001).

Spiritual human beings always are excavating the nature as a tool for familiarizing himself with their the supreme being. Shapes and natural spaces, created by the supreme being, are more comprehensive and eternal than anything made by human (being Ibid: 81). This world is a secular, materialistic and meaningless world that causes human being to face dual personality. An architect not apparently but actually joins three elements together: man, spiritual and physical space (Nazarizadeh, 2006).

The spiritual role of contacting with nature for man in environment and daily life is the main ignored part, resulted by materialistic thoughts, development of industry and concentration on economic efficiency. With advent of industrial revolution and nature expansion, the main trend was focused on maximum usage of natural resources regardless probable damage to the environmental surrounding and subsequently man.

In addition to expansion and development of cities, caused by materialistic point of view, human being contacts with nature dramatically decreased and as a result, many problems appeared

for metropolitan cities' residents. In fact, man of industrial time was neglectful of this rule: world is in stability and the most important responsibility of human being is to conserve this stability because in case of losing it, the first one, hurt enormously, would be man himself.

The existence of stability, regularity and unity has been emphasized by Islamic thinkers and secondly with advancement of new science and a short pause, caused by partial approach (Naghizadeh, 1999). This article aims to discuss the role and influence of natural rules relying on cultural and Islamic thoughts on man and his environmental surroundings and review how they can respond man's spiritual needs.

Islamic world-view and nature

In some Islamic interpretations, nature is introduced as a main cause for fall of man. Moreover, it can be part of his impeccability without knowing the nature, releasing from barrier of this materialistic world would not be possible (Khomeini, 1999). Additionally, Islamic thoughts present the entire nature as a place of worship. Therefore, architecture and environmental design should provide for nature with purity and serenity in tumult of confusion (Burkhuart, 1991), and nature can be used as a paradigm for determining the built environment in Islamic societies.

Thinking deeply on the nature, its components and elements, the dominant rules on world and considering the harmony and stability of universe is one of the most important tool for recognize a tiny part of world (Motahari, 1992).

And, man is constantly encouraged to familiarize himself with natural phenomenon and "The Holy book introduces the whole universe as symbols for looking upon (Ibid, 143).

Hence, Islamic teachings reminds Muslims that contacting and deeming the nature can create the feeling of reminding the presence of the supreme being and surely can guide him to achieve an appropriate recognition over Islamic principles such as monotheism as in Hadith Qudsi is said that: "I was a hidden treasure; I loved to be known. Hence I created the world so that I would be known (Nasr, 1982). Furthermore, recognition of creatures such as natural elements and their definitions represent Islamic thoughts because each civilization in comparison with nature is reflecting the divine facts (Nasr, 1980).

It is necessary to mention that man is the supreme being's Khalifa on earth and he should fulfill his actions with perceiving the principles. In other words, man as microcosm physically and spiritually is a part of macrocosm and should comply with nature's rules. This attitude helps him act in a divine manner and learn how to live better and be in harmony with dominant regularity and keep himself from corruption. Therefore, paying attention to natural regularity is the main Islamic thinkers' concern such as Farabi who believed in "the regularity of utopia is based on regularity in the world" (Nasri, 1984).

Regarding the aforementioned issues, man thinks of universe and its principles as given paradigms and always at first makes an effort to recognize and apply them to built-environment. Nasr, in order to analyze Avicenna's ideas cites, investigated that the nature is not restricted to discovering the phenomenon and their appearances but a Muslim spends time to discover the inner and outer relationship with respect to holistic and partial relations.

Diverse approaches to recognize the nature

In Holy book, a variety of ways including religious and mystical approaches, introduce for recognizing the nature and presents it as bed rock for shaping physical and spiritual dimensions. Man is responsible for exploiting the nature. The value of nature is considered lower than the man's spiritual position.

Koran introduces the life-giving characteristics of nature and urge man to benefit and exploit it under the supreme being's will. The Holy book mentions that the fertility of nature produces rights for nature and man is responsible for conserving and maintains it. In Hinduism, Zen and

Zoroastrian, material is the least valuable thing and it must serve the man's demands in order to help him achieve perfection. It seems that Zoroastrian is one of the the most reasonable religion about nature (after Islam) and huge parts of Avesta is praising the nature, nature forces and also present manners to confront the nature.

The foundation of these schools of thoughts consists of friendship, enjoyment and intimacy with nature. For this reason, the rights of nature become important. In Zen and Buddhism, it is recommended to live naturally and unification with nature. Shinto in Japan emphasizes that the soul of each individual is in consistency with surroundings and suggests an easy death in the nature.

In Taoism in China, it can be seen, if a Chinese or Japanese human is bored of life, he seeks refuge in the nature (Nash, 1970) but in medieval ages, an extreme level of unrealistic art is seen. Iranian artists and poems have a Koranic point of view toward nature (Shargi, Teimouri, 2012).

René Descartes claims that divine and materialistic objects have similarity with each other and are parts of a whole. In general, materialistic world is explained by three specific characteristics including length, widths and height. Living objects are complying with rules of still objects and life is not more than former characteristics. Man is nothing but a machine, apart from it, human has a soul that gives him common sense and rationalization as well but animals are deprived of having these essential characteristics. It is said that our existence is different from nature and in humanistic characteristics, valuable elements are those, created automatically by changing animal instinct.

Mulla Sadra interpreted nature as a womb for forming soul. This gives nature some rights that human must not forget them. On the other hand, nature cannot satisfy all spiritual demands and for an evolved soul it can act as a buffer. Hierarchical position of nature helps man manage the nature and apply it to common benefit between himself and nature (Sorush, 2005).

Functional approach to the nature

The worst functional approach appeared in Bahous School and based on their world-wide theories: anything in this world is a product of functional formula and its architectural meanings should be discovered by modern man. And, building should say the truth to him and do not cheat the user. To summarize, Solivan quotation form follows function. In this school of thought, everything ends up to having materialistic function and their natural dimension is ignored. This trend is seen in architectural projects of Miss Van Der Rohe. His famous slogan "less is More" depicts his interests in using austere shapes. He considers forms as long as they can serve functional purposes. His main trend is to pay attention to technology.

Natural elements in Holy book

The results of such a thought that introduce nature and its components as divine symbols is each natural elements remind us of spiritual values and must lead to power of the supreme being. Although there has been so many discussions about materialistic advantages of nature, symbolic meaning of nature and its elements have been neglected. In other words, before seeking for principles and values, the symbols themselves are paid attention. Below some symbolic meanings of mentioned phenomenon are discussed:

Light

Light is a symbol to describe supreme and beautiful concepts. The lack of light, shadow contains fabulous meaning (figure 1). Shadow has different connotations. As the Holy book describes paradise with constants shadow or beneficent people enjoy cedar and shadowed trees but a shadow dominates over hellish people. This shadow stems from smoke of fire in hell and it never becomes cold (Naghizadeh, 1999).



Figure 1: light in the nature

Wind

Wind plays an important role in continuation of life among many creatures on earth and help adjust the climatic condition, transporting the pollution, insemination of plants, enunciation of mercy of the supreme being (Al-Furqan: 48 and An-Naml: 63) a divine symbol (Ar-Roum: 46) and also eternal suffering (Adh-Dhariyat: 41, Al-Ahzab: 9, and Al-Ahqaf: 24).



Figure 2: wind in the nature

Water

Water as an essential element (figure 3) for life (Al-Anbiya: 30, Al-Furqan: 57, Ar-Roum: 24) has symbolic connotations including paradise (Al-Baqara: 25, Yunus: 5, Al-Ghashiya: 12). Life (Al-Jathiya: 5, Al-A'raf: 57, Al-Baqara: 164, Az-Zukhruf: 11, Fatir: 9) purity (Al-Furqan: 48, Ma'ida: 6), beauty and flourishing (Al-An'am: 99), quench thirst (Al-Hijr: 22).



Figure 3: Water

Soil

Soil as the first material for creating man (Al-An'am: 2, Al-Mu'minoon: 12, As-Saffat: 11, As-Sajda: 7 and An-Naml: 63). Also, soil is the final place of man's body and is filled by elements that almost have all materialistic demands inside (figure 4). On the other hand, in some important issues such as cleanliness and purity, water can replace with soil and help man prepare for praying. Soil is a place for worship (Imam Khomeini, 1999).



Figure 4: Soil

Plants

Different types of plants can produce oxygen and absorb pollution, also can make the built environment milder. Plants are symbols of paradise and remind afterworld (figure 5). In the Holy book, the supreme being takes an oath in some spices of plants or name some as gift of God. (Naghizadeh, 1999).



Figure 5: Plants symbols of paradise

Animals

Different kinds of animals are divine symbols that deliberation on their creations and the quality of their life can lead human to submitted principles in Islamic teachings (Naghizadeh, 1990). (Figure 6)



Figure 6: Creatures as divine symbols

Other elements

Some other elements such as mountains, sky and whatever are in it (moon, sun and stars) not only do they have materialistic bless, also they can help think deeply and determine time (figure 7) place and orientation (Naghizadeh, 1999).



Figure 7: The elements of nature for thought

Inspiration from nature in architecture

Imitation and inspiring by nature falls in three categories and each of them is more complete and intelligent over previous style. Third style is the best way.

Inspiration shapes in the nature

In this method, the visual imitation is prior to structural principles, for instance layers of earth is formed in accordance with forces but architects ignore them and just interpret the current situations. Turning apparently natural building to the reality is complicated and seems to be unrealistic as nature uses the minimum energy while it has to spend large amount of energy to create building with irregular shapes.

Conceptual inspiration by nature

Metaphor and meaning can protect us from superficiality. Architectural works, based on a comprehensive interpretation are the best patterns for creative inspiration (Antoniades 1990).

TWA airport in USA designed by Eero Saarinen is considered as metaphorical example (figure 7). The top view depicts a bird and in white metal roof, structure expresses a frame for, similar none-engine airplane. What make this design different are organically curved lines of upper parts in ceiling, these curves at first are triangle rafters and then became curved, and the interior design looks like spine.

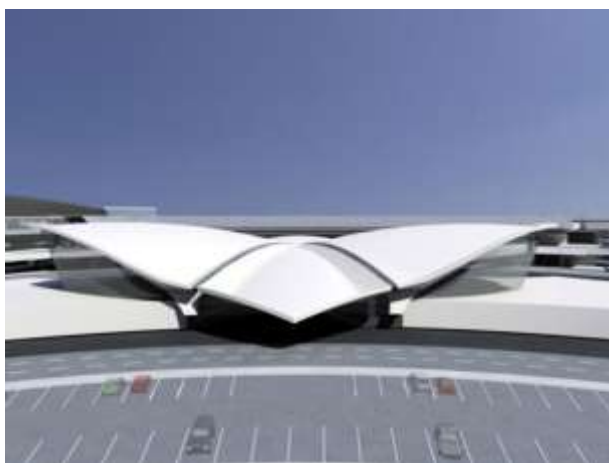


Figure 8: TWA airport

Inspiration by nature rules

The best way in order to inspire from nature is usage of its regulation. It should be considered that inspiration does not mean to imitate only one example. In some structures, resemblance to nature is obvious. Maintaining the existed structure against forces in natural phenomenon is the most important philosophical justifications. In the nature, there are four important solutions, applying to confront threatening outside forces:

Avoiding bending stress

Nature always intends to use tensile and compressed stress and the bending stress in used only if the layer structure exists. Essentially, all natural structures have a layer texture, meaning surfaces and volumes are overlapping each other, the nature of these layers creates only tensile and

compressed stress because bending cause wasting in usage of materials and nothing is created useless in the nature (Golabchi, 2003).

Resistance against forces with flexibility and turning shapes

This method is very common in natural structure and has a high flexibility. For instance, many birds prefer to build their nests on tender and thin branches for more flexibility, more resistance. In this case, using less material responds to resistance properly.

Managing stress

This method is useful to confront with stresses. It is based on reducing amount and intensity of stress. For instance, trees in case of strong blowing wind bend and let the wind pass and as a result reduce the stress on their trunks.

Use stresses against each other

During blowing, trees bend and save some wind energy to potential energy and in back and forth movement, empty it in reverse direction. The arrangements of branches are in such a way that weight in one side can hold the other side and vice versa. It can be seen in the Alamillo Bridge designed by Santiago Calatrava. In its designing, the opening and mast are in stability and the combination of aesthetics principles are applied. These two structural elements are asymmetrical (figure 8).



Figure 9: Alamillo

Maintaining the identification in the nature

In the nature, species are aware of their capabilities and grow in determined area and reproduce. The possibility of grafting exists among plants but is not common. Each plant can be grafted to the similar one. Animals are following the same rule otherwise many eccentric creatures were produced. In architectural world, the essential characteristics should be kept safe but recently the eclectic view is ending up to wired and unfamiliar volumes that so-called architecture (Shargi, Ganbaran, 2012).

Architecture in relation with nature

In Islamic thought, man with respect to his creations should provide bedrock for fulfilling the main essence of nature and its phenomenon. Also, he should ascribe the supreme characteristics to objects (Tabatabaei, 1989). The evolution and perfection should guarantee the continuous process of these objects in the universe. In this case, architecture as space, containing life is the most important man-made phenomenon (Burkharat, 1997).

Finally, spaces built by man should prepare a proper ground for perceiving the natural environment and movement toward perfection, additionally the responsibility of other fields of art can be building spaces with high efficiency (Ibid, 86), Based on this, the goal of architecture is not restricted to building as shelter, also it should provide for man with perfection and evolution along with natural environment.

Due to essential unification of man and nature, man's actions and his creations are part of universe and must be in the continuation and complete harmony with dominant rules and avoid any kind of secession and division because it can distract the architecture and ends up to misleading thought as Jalal-Aldin Davani consider the perfect industry as its similarity to nature.

The necessity of having harmony with essential characteristics of natural elements represents the symbolic and spiritual image of nature and complying with nature rules, inspiration from natural function and direct benefitting and even imitation are paid attention by Islamic thinkers. In conclusion, it could be in a significant harmony with nature.

Harmony with nature is to make compatibility between spaces made by man and three vital faces of nature including physical, essential and spiritual rules. The evolution of nature, perfection and putting the potentials in practice are the main source of inspiration.

- The harmonic goals with nature
- Energy conservation
- Harmony with climate
- Reducing in usage of new materials
- Fulfilling man demands
- Paying attention to eternally divine recourses
- Mutual dependence among man, nature and architecture

Combination the nature and architecture in Islamic period

The study in Muslims historical cities shows that in spite of their climates i.e. (mainly located in hot and arid climate), systems and formation are in accordance with nature and man's demands and Muslims' effort were in order to benefit from natural rules and knowing the natural elements ,used to create harmony, stability and proportions. Paying attention to the nature and its elements specially water and plants stem from Islamic teachings and prophet quotations as he mentioned: "If a Muslim plants a tree or sows seeds, and then a bird, or a person or an animal eats from it, it is regarded as a charitable gift (sadaqah) for him." (Bukhari) He always recommended that woods and trees around Medina should be protected safely (Shokuei, 1986).

Protection of trees and reproducing them has a spiritual meaning and result eternal gift. Therefore, it is not accidental that sprawling cities in Islamic territory from Mediterranean Sea to Africa and China were expanded. But Muslims confronts with environment with different climates and invents a new method to deal with nature (Ibid, 197).

Gardens not only do they represent the natural elements and ask man to recall divine gifts, also due to lack of ceiling, present sky, moon, sun, stars, clouds and winds and remind observer of these natural phenomenon. Gardens subtilize the solidity, brutality and materialistic environment and teach man how to confront with.

Additionally, it provides for man with this opportunity to compare between his man built environment and nature. In case of lacking natural elements in urban spaces, man faces with building and built spaces and can think of man as the one who is creator of what he sees but what can be a proper solution is juxtaposition of built environment and natural elements (Aminzadeh, 2000).

The existence of details in different scales

Nature contains all elements with precise details and it is regardless the size of surface. When a flower is observed closely, more details are seen. In architecture, buildings can be perceived in diverse distances, a step further shows detailed elevation and materials. Architectural elevations with no details are boring (figure 9).



Figure 10: a review on scale of detail in building

Contradiction with nature in Islamic architecture

What makes some believe that Islamic architecture in contradiction with nature is nothing but the supplementary aspect of nature. Architectural productions exclusively in the past that man was closer to his nature display contradiction with nature. Mesopotamian Ziggurats are artificial mountains in a very flat land. In Iran, Minarets in central cities are confronted with horizontal lines of desert. Vivid, shining and tick colors of tiles, carpets and local costume is considered as an effort to add more colors in environment. Of course, this contradiction is not separated from nature and in aesthetic points of view, the value of each perceptive element is shown in comparison with its opposite objects, Contradiction can increase the value (Afshar Naderi, 1995).

The connection between city and environment with nature

Man should contact and communicate with nature and its elements and make an effort to conserve and protect it, in other words, his own perfection and evolution and nature as well. Regarding the qualitative characteristics of urban cities (as a place and space for doing activities by human) and their relation with nature, man is excavating the principles in Islamic teaching and learning from previous experiences among Muslims and none-Muslims societies. It is vital to consider that repetition and imitation without evaluating them with Islamic rules are not possible (Naghizadeh, 1999).

In historical cities, man has contact with nature based on hierarchical system including a single unit to the entire city (Naghizadeh, 1999). A study on cities in Islamic period proves that

these cities are mainly located in tough climates; the formation of these cities should be along with creating harmony and stability between built environment and nature. Muslims with respect to natural rules could create a habitable space for users.

Nowadays, many scholars believe that Islamic culture have applied a specific method in order to face nature properly and the main principle is based on creating harmony with natural environment and unification with creator (Shokoui, 1986) the relationship between man and nature, using local materials, benefitting from ventilation system, combination of natural elements and architecture, using architectural elements in accordance with climate, proper choice of shapes, colors and materials are the most fundamental factors in relation between man and Islamic culture.

Conclusion

In the history of architecture, nature is always introduced as a paradigm in designing but applying nature to contemporary architecture is superficial and imitative and it is rarely possible to see the trace of nature. This produces a kind of architecture that even cannot satisfy on surface. The existed aesthetics in nature is not man built and achieve by proper respond to function. The natural structures have reached sustainable forms.

In naturalistic designing aesthetics is not the only concern but consistency and continuation are prior to it. Considering natural phenomenon and their symbolic meanings, religious concepts such as monotheism and future life are given the preference and are fulfilled by thinking and observation.

Man needs nature in many aspects, as a result, the health of nature and close contact to it are obligatory. This demand is not restricted to materialistic and economic uses also spiritual and psychological aspects are included as well. The possibility of making the connection between man and nature and benefitting from it is not possible unless our attitude toward nature and its resources change hugely and adjust with Islamic principles.

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